Approved
Minutes of the Technical Advisory Committee Meeting
December 8, 2009

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| **Attendees:** | Roger Thompson | Craig Heindel |
| | Steve Revell | Gail Center |
| | Scott Stewart | Gary Adams |
| | Claude Chevalier | Rodney Pingree |
| | Anne Whiteley | Kim Greenwood |

**Scheduled meetings:**

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| January 12, 2010 | 1 – 4 PM | Room 100 Stanley Hall |
| February 9, 2010 | 1 – 4 PM | Room 107 Stanley Hall |

**Review of minutes**

The draft minutes for the November 24, 2009 meeting were reviewed. It was suggested that Allison Lowry and Bernie Chenette should be dropped from the list of regular members. It was then suggested that after expiration of the 5 year appointments under the statute that there is no longer a difference between members and others present so that all those present should just be listed as attending the meeting. There was also discussion that minutes were not clear about when a system is considered failed. Roger will add clarifying language to the minutes. Gail asked if the Agency website would coordinate information with the Sites Management Section. Anne said it would. Gail said that the minutes on page 4 should replace radionuclides with uranium as that is the only standard the Health Department has created. Gail asked that the permitting requirements for aeration treatment systems be clarified. Anne and Roger will work this out. Anne said that a permit would be required unless there is an exemption. Gail noted that there is no drinking water standard for radon. Craig suggested that the question should be whether or not TAC thinks the treatment systems should be regulated. Anne suggested adding radon and arsenic to the discussion of systems that would not be regulated.

**TAC Annual Report**

Roger reviewed his work on updating the tables covering the number of permits issued, innovative systems approved, etc. He is proposing to cover the most recent 5 years in the tables with a note that information from earlier periods is covered in previous TAC reports. The committee agreed with this approach. Claude asked about including the processing times for the permits that have been issued. Craig asked if this report is the place to elaborate on this information. Roger and Anne thought it would be useful information and Roger said that this is fairly easy to produce.

**Water Treatment Systems**

Anne reviewed the meeting she and Roger had with the Commissioner just before the meeting. The Commissioner is looking for TAC to reach agreement on language quickly so that the rule making process can start. The Commissioner is open to including systems that treat for arsenic in the exempt category if TAC supports that approach.

Anne then reviewed the comments she had received on the draft language she had prepared dated 12/3/2009. Craig and Rodney submitted comments as did the Sites Management Section. Kim's e-mail that was circulated today included comments based on review of an earlier draft. There are two drafts with same date that added to the confusion.

Anne said the current draft is the one where the exemption language includes the installation and operation of systems. Sections B and C of exemption #23 were revised based on comments from the previous TAC meeting. The language in exemptions #23 and #24 was updated based on comments from the Sites Management Section. The Sites Management Section noted that about 80% of their projects are related to leaks from underground storage tanks. Treatment systems are installed as soon as there is a defined threat to a water supply and all systems are under the authority of the ANR Secretary. The proposed exemption #25 related to disposal of filter backwash from systems treating for radionuclides was deleted.

Anne said that Gary had contacted the Commissioner and asked about having an exemption for systems treating for arsenic. Anne recalled that John Forcier had objected at an earlier meeting to exempting arsenic treatment systems. Anne asked if the TAC members supported creating an exemption for arsenic treatment systems. Gary said that about 8 years ago, prior to when EPA lowered the arsenic MCL for drinking water, he reviewed the existing systems on display at a trade show. Some of those systems were not too good. However, with the new standard in place, the system designs have been upgraded and seem to be very reliable and based on design factors that include flow rates and other important design factors. The problem with arsenic treatment systems is that people can go onto websites a purchase a system that may or may not work because the proper design factors were not considered in the selection process. Gary said that the two main manufacturers are now using resin based treatment systems that work well. Gary noted that even the best systems require maintenance and if not properly maintained they will not provide good treatment and requiring an engineer to design the system will not overcome failure to maintain the system. Gary said that he refers people to the Vermont Department of Health website because they have great information related to the need for maintenance. Gary said that he did not see a need to have an engineer design arsenic treatment systems for non-public water systems.

Anne agreed that regardless of the permitting requirements there is no assurance that the system will be maintained. Anne summarized Gary's comments as a statement that the extra cost associated with a full permitting process would not be a good value.

Gail observed that requiring a professional engineer and a permit might be a disincentive to installing a treatment system which is the ultimate goal. Kim asked if it is more important to have a good design or good maintenance. Craig said he would support an exemption for systems serving a single family residence. Kim asked if the reasons for John Forcier's objections are known.

Anne asked for vote on exempting arsenic treatment systems for SFRs. 7 voted yes and 2 abstained with zero voting against. Kim asked how many people did not feel they had enough information to decide. Gail asked about having a list of people approved to design arsenic treatment systems. Rodney said that considering all of the effort to license septic designers there should be an equivalent for water treatment designers.

Anne asked for a vote on exempting other non-public systems. Craig asked Gary if the SFR type systems scale up to larger non-public systems. Gary said that he would involve a professional engineer for liability reasons. Claude said that his company is responsible for systems that serve a total of 15,000 users and sees no significant differences between systems serving one SFR and those serving other non-public systems. Gail noted that the Department for Children and Families licensing regulations do not require testing for arsenic at day care operations. Gail said that the design an operation requirements are pretty much the same for SFR and other non-public systems.

Steve asked about a well serving 5 apartments with 2 bedrooms in each unit. This would be assumed to have capacity for 20 occupants and therefore would not be a public system. Steve asked Claude how often such a system would need maintenance. Claude said he tracks the systems and calls the customers to remind them of when the maintenance is due.

Roger asked what level of treatment is achieved with resin filters. Gary and Gail said that arsenic is routinely removed to less than 1 PPM against a standard of 10 PPM.

Anne asked for a vote on an exemption for arsenic treatment on all non-potable water systems and there were 8 votes yes, no objections, and with 1 abstaining. Anne asked if the system needed to treat the whole house and it was decided for arsenic it can be a point of use system.

Anne asked if the group wanted to next consider treatment for radon. Rodney asked if we had already covered all of the acute contaminants. It was decided to consider radon next and the group voted 8 in favor and with 1 abstention to deregulate radon treatment systems for all non-public systems.

Nitrate contamination was the next topic. Craig asked if there are existing well engineered package type systems for nitrate removal. Gary said there are not pre-engineered systems for nitrate to the extent that systems exist for treating arsenic. Gary noted that the systems can be tricky and in some cases can malfunction so that the water ends up with a higher nitrate concentration at a particular point in time. Gail said that

most nitrate treatment systems use a reverse osmosis design. Gary said that reverse osmosis systems can work and can include a flow meter that shuts down the system when maintenance is needed. Gary also noted that in most cases the water being treated is only slightly higher than the drinking water standard with sources very high in nitrate being pretty rare. When the issue of whether nitrate systems should require designs prepared by professional engineers, Craig said that John Beauchamp thinks that a Water Quality Association Level 6 license should be acceptable as well. Gary said that resin treatment systems for nitrate are also available but they require a comprehensive water quality test to ensure they will function well. Anne suggested leaving nitrate to be considered at a later time.

Gail asked if lead treatment systems should be deregulated. The consensus was to deregulate. Rodney suggested that all treatment systems for contaminants with chronic concerns be deregulated. Kim asked where the Agency's authority to regulate treatment systems came from in the first place. Anne replied that it comes from statutory language which defines water systems as including the source, the distribution, and treatment systems. This was established in 2002. The limitation that all designs must be prepared by professional engineers was made explicit in 2005 when the Wastewater System and Potable Water Supply Rules were updated giving the non-engineer designers more authority while prohibiting them from designing water treatment systems. Once people realized how many treatment systems exist and are subject to regulation, and that there is a long history of treatment systems being installed without a history of problems associated with these systems, it was decided to see how much of the process could be deregulated.

Rodney proposed that we deregulate any treatment system not used to treat for acute contaminants based on the earlier decision to deregulate treatment for pathogens. Rodney restated his proposal to suggest deregulation of all water treatment systems for non-public water supplies in light of the earlier decision to deregulate treatment systems for pathogens. The group voted on this with 8 votes in support and with 1 abstention.

Anne said she would need to contact the engineering groups to see if they would be in support or opposition. After extended discussion it was decided this might be too big a change to bring to the legislature at one time and it was decided to only add lead, arsenic, and radon to the list of deregulated treatment systems.

Items prioritized for discussion with high, low, and medium ranking

1. Soil identification vs. perc test **medium**
2. Curtain drain with presumption of effectiveness **high**
3. Revisions to desktop hydro chart **medium**
4. Minimum amount of sand under a mound **high**
5. Grandfathered design flow and conversion of use policy **high**
6. Updating of design flow chart **high**

**Executive Committee**

John Forcier, Steve Revell, Lance Phelps, Phil Dechert, and Roger Thompson
Alternates – Chris Thompson, Spencer Harris, Jeff Williams

**Subcommittees**

Hydrogeology - Craig Heindel, Dave Cotton and Steve Revell.

Training subcommittee - John Forcier, Roger Thompson, Dave Cotton, and Barbara Willis.

Drip Disposal – Roger Thompson, Dave Cotton, Steve Revell, Alan Huizenga

Water treatment systems – Gail Center, Jeff Williams, Rodney Pingree, Dave Cotton, Lance Phelps, and Roger Thompson.